

Clean Claims

6. A method for producing a waveguide fiber in a draw furnace including a graphite, generally tubular muffle having an inner surface comprising the steps of:

providing a high purity silicon carbide coating on the inner surface of the graphite muffle wherein the high purity silicon carbide coating contains less than about 900 parts per billion of impurities and the muffle comprises at least two separate, stacked generally tubular axial segments;

disposing waveguide fiber preform in the muffle;

heating the furnace to a temperature sufficient to draw fiber from the preform; and
drawing fiber from the preform

7. The method of claim 6, wherein the temperature of furnace is at least about 1900°C.

8. The method of claim 6, wherein the temperature of the furnace is at least about 2000°C.

10. The method of claim 6, wherein the waveguide fiber drawn from the furnace has a point defect loss less than about 4%.

11. The method of claim 6, wherein the waveguide fiber drawn from the furnace has a point defect loss less than about 1%.

12. The method of claim 6, wherein the high purity silicon carbide coating has a layer thickness of at least two mils.

13. The method of claim 12, wherein the high purity silicon carbide coating has a layer thickness of between about 5 and 8 microns.

14. The method of claim 6, wherein the high purity silicon carbide coating contains less than about 200 parts per billion of impurities.